

## CLAIMS

What is claimed is:

- 1 1. A method comprising:
  - 2 providing a connector comprising a plurality of electrically conductive
  - 3 elements in a thin, flexible, electrically insulating support; and
  - 4 coupling lands on an integrated circuit (IC) to corresponding lands on a
  - 5 substrate with the electrically conductive elements.
  
- 1 2. The method recited in claim 1, wherein the electrically conductive elements
- 2 comprise a compressible material.
  
- 1 3. The method recited in claim 2, wherein the compressible material comprises
- 2 a wire wad.
  
- 1 4. The method recited in claim 1, wherein the support comprises a hole for
- 2 each electrically conductive element.
  
- 1 5. The method recited in claim 1, wherein the support comprises a flexible
- 2 sheet.
  
- 1 6. The method recited in claim 1, wherein the electrically conductive elements
- 2 comprise crystals.  
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- 1 7. The method recited in claim 6, wherein the crystals comprise a coating of
- 2 electrically conductive material.
  
- 1 8. The method recited in claim 1 and further comprising:
  - 2 securing the IC, support, and substrate in a package.

1   9.     The method recited in claim 8, wherein securing is performed by a package  
2   lid.

1   10.    The method recited in claim 8, wherein securing comprises physically  
2   compressing the IC, support, and substrate.

1   11.    The method recited in claim 1 and further comprising:  
2         providing an additional connector comprising a plurality of electrically  
3         conductive elements in a thin, flexible, electrically insulating support; and  
4         coupling lands on an IC package to corresponding lands on an additional substrate  
5         with the electrically conductive elements of the additional connector.

1   12.    The method recited in claim 11, wherein the additional substrate comprises  
2   a printed circuit board.

1   13.    A method comprising:  
2         providing a connector comprising a plurality of electrically conductive  
3         elements in a thin, flexible, electrically insulating support; and  
4         coupling lands on an integrated circuit (IC) package to corresponding lands on a  
5         substrate with the electrically conductive elements.

1   14.    The method recited in claim 13, wherein the electrically conductive elements  
2   comprise a compressible material.

1   15.    The method recited in claim 14, wherein the compressible material  
2   comprises a wire wad.

1 16. The method recited in claim 13, wherein the support retains the electrically  
2 conductive elements substantially immobile with respect to X and Y axes but allows  
3 the electrically conductive elements to move with respect to a Z axis.

1 17. The method recited in claim 13, wherein the support comprises a hole for  
2 each electrically conductive element.

1 18. The method recited in claim 13, wherein the support comprises a flexible  
2 sheet.

1 19. The method recited in claim 18, wherein the sheet comprises a plastic.

1 20. The method recited in claim 18, wherein the electrically conductive elements  
2 comprise pins in the sheet.

1 21. The method recited in claim 13, wherein the electrically conductive elements  
2 comprise regular geometric objects.

1 22. The method recited in claim 13, wherein the electrically conductive elements  
2 comprise irregular geometric objects.

1 23. The method recited in claim 13, wherein the electrically conductive elements  
2 comprise material from the group comprising aluminum, antimony, beryllium,  
3 bismuth, cadmium, carbon, chromium, copper, gold, iron, lead, magnesium,  
4 manganese, molybdenum, nickel, palladium, platinum, silicon, silver, tin, titanium,  
5 tungsten, zinc, metal silicide, doped polysilicon, and plastic.

1 24. The method recited in claim 13, wherein the electrically conductive elements  
2 comprise crystals.

- 1    25.    The method recited in claim 24, wherein the crystals comprise a coating of  
2    electrically conductive material.
- 1    26.    The method recited in claim 13 and further comprising:  
2    securing the IC package, support, and substrate in a package.
- 1    27.    The method recited in claim 26, wherein securing is performed by a package  
2    lid.
- 1    28.    The method recited in claim 26, wherein securing comprises physically  
2    compressing the IC package, support, and substrate.
- 1    29.    A solderless method of mounting an integrated circuit (IC) on a substrate,  
2    the method comprising:  
3         positioning a thin, flexible, electrically insulating support on the substrate, so  
4         that a plurality of electrically conductive elements on the support are aligned with  
5         respect to a corresponding plurality of lands on the substrate; and  
6         positioning the IC on the support, so that a plurality of lands on the IC are aligned  
7         with respect to a corresponding plurality of electrically conductive elements on the  
8         support.
- 1    30.    The method recited in claim 29, wherein the operations are performed in the  
2    order recited.
- 1    31.    The method recited in claim 29 and further comprising:  
2    compressing the IC, support, and substrate together to maintain electrical contact  
3    between the lands on the IC and the lands on the substrate.
- 1    32.    A solderless method of mounting an integrated circuit (IC) package on a  
2    substrate, the method comprising:

3           positioning a thin, flexible, electrically insulating support on the substrate, so  
4       that a plurality of electrically conductive elements on the support are aligned with  
5       respect to a corresponding plurality of lands on the substrate; and  
6       positioning the IC package on the support, so that a plurality of lands on the IC  
7       package are aligned with respect to a corresponding plurality of electrically  
8       conductive elements on the support.

1     33.   The method recited in claim 32, wherein the operations are performed in the  
2       order recited.

1     34.   The method recited in claim 32 and further comprising:  
2       compressing the IC package, support, and substrate together to maintain electrical  
3       contact between the lands on the IC package and the lands on the substrate.

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35.   An electronic package comprising:  
1       a die;  
2       a substrate; and  
3       a compressible connector to couple the die to the substrate.

1     36.   The electronic package recited in claim 35, wherein the connector comprises  
2       a plurality of electrically conductive elements to couple lands on the die to  
3       corresponding lands on the substrate.

1     37.   The electronic package recited in claim 36 and further comprising:  
2       a compression element to maintain electrical contact between the lands on the die  
3       and the lands on the substrate.

1     38.   The electronic package recited in claim 37, wherein the compression  
2       element is a lid comprising a member in contact with the die and a support coupled  
3       to the substrate.

1    39. The electronic package recited in claim 36, wherein the electrically  
2    conductive elements comprise a compressible material.

1    40. The electronic package recited in claim 35, wherein the connector  
2    comprises:

3         a flexible support formed of electrically insulating material; and  
4         a plurality of elements formed of electrically conductive material.

1    41. The electronic package recited in claim 40, wherein the support is formed of  
2    plastic, and the plurality of elements are from the group consisting of wire wads,  
3    pins, blobs, lumps, particles, and crystals.

42. The electronic package recited in claim 41, wherein the elements comprise a  
coating of electrically conductive material.

1    43. The electronic package recited in claim 40, wherein the plurality of elements  
2    comprise material from the group consisting of aluminum, antimony, beryllium,  
3    bismuth, cadmium, carbon, chromium, copper, gold, indium, iron, lead, magnesium,  
4    manganese, molybdenum, nickel, palladium, platinum, silicon, silver, tin, titanium,  
5    tungsten, zinc, metal silicide, doped polysilicon, and plastic.

1    44. An electronic package comprising:  
2         an integrated circuit (IC) package;  
3         a substrate; and  
4         a compressible connector to couple the IC package to the substrate.

1    45. The electronic package recited in claim 44, wherein the connector comprises  
2    a plurality of electrically conductive elements to couple lands on the IC package to  
3    corresponding lands on the substrate.

1    46. The electronic package recited in claim 45 and further comprising:  
2    a compression element to maintain electrical contact between the lands on the IC  
3    package and the lands on the substrate.

1    47. The electronic package recited in claim 46, wherein the compression  
2    element is a lid comprising a member in contact with the IC package and a support  
3    coupled to the substrate.

1    48. The electronic package recited in claim 45, wherein the electrically  
2    conductive elements comprise a compressible material.

1    49. The electronic package recited in claim 44, wherein the connector  
2    comprises:  
3         a flexible support formed of electrically insulating material; and  
4         a plurality of elements formed of electrically conductive material.

1    50. The electronic package recited in claim 49, wherein the support is formed of  
2    plastic, and the plurality of elements are from the group consisting of wire wads,  
3    pins, blobs, lumps, particles, and crystals.

51. The electronic package recited in claim 50, wherein the elements comprise a  
coating of electrically conductive material.

1    52. The electronic package recited in claim 49, wherein the plurality of elements  
2    comprise material from the group consisting of aluminum, antimony, beryllium,  
3    bismuth, cadmium, carbon, chromium, copper, gold, indium, iron, lead, magnesium,  
4    manganese, molybdenum, nickel, palladium, platinum, silicon, silver, tin, titanium,  
5    tungsten, zinc, metal silicide, doped polysilicon, and plastic.

1       53. An electronic system comprising least one electronic assembly comprising:  
2           an integrated circuit (IC) package;  
3           a substrate; and  
4       a compressible connector to couple the IC package to the substrate.

1       54. The electronic system recited in claim 53, wherein the connector comprises a  
2       plurality of electrically conductive elements to couple lands on the IC package to  
3       corresponding lands on the substrate.

1       55. The electronic system recited in claim 54, wherein the at least one electronic  
2       assembly further comprises a compression element to maintain electrical contact  
3       between the lands on the IC package and the lands on the substrate.

1       56. A data processing system comprising:  
2           a bus coupling components in the data processing system;  
3           a display coupled to the bus;  
4           external memory coupled to the bus; and  
5           a processor coupled to the bus and including at least one electronic assembly  
6       comprising:  
7           an integrated circuit (IC) package;  
8           a substrate; and  
9       a compressible connector to couple the IC package to the substrate.

1       57. The data processing system recited in claim 56, wherein the connector  
2       comprises a plurality of electrically conductive elements to couple lands on the IC  
3       package to corresponding lands on the substrate.

1       58. The data processing system recited in claim 57, wherein the at least one  
2       electronic assembly further comprises a compression element to maintain electrical  
3       contact between the lands on the IC package and the lands on the substrate.

